

Joint Committee on Administrative Rules

ADMINISTRATIVE CODE

TITLE 41: FIRE PROTECTION

CHAPTER I: OFFICE OF THE STATE FIRE MARSHAL

PART 141 POLICY AND PROCEDURES MANUAL FOR FIRE PROTECTION

PERSONNEL

SECTION 141.303 ADVANCED TECHNICIAN FIREFIGHTER

Section 141.303 Advanced Technician Firefighter

An Illinois Advanced Technician Firefighter program shall meet or exceed the level identified in NFPA 1001. Individuals may certify as Firefighter III for 5 years, at which time the certification will no longer be offered and the individuals will be required to successfully complete the additional course work if they desire to qualify for certification as an Advanced Technician Firefighter.

a) Prerequisites

- 1) Certification as a Firefighter II or Basic Operations Firefighter (see Sections 141.300 and 141.301).
- 2) Successful completion of the Advanced Technician Firefighter course.
- 3) There shall be a minimum of 40 Instructional hours to safely and successfully complete the Advanced Technician Firefighter course (see Section 141.303).
- 4) Passage of the State written examination (see Section 141.200).
- 5) Passage of the State practical skills examinations (see Sections 141.200).
- 6) Engagement in fire fighting in an organized Illinois fire department as a fire protection person according to the Act, as attested to by the employing Fire Chief of the individual seeking certification.
- 7) Attainment of 3 years fire service experience beginning from the Basic Operations Firefighter/Firefighter II certification date.

- 8) Fire Service Vehicle Operator certification.
 - 9) Vehicle and Machinery Operations certification.
 - 10) Required NIMS 200. Training documentation shall be kept in fire department training files.
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- b) Fire department or individual reimbursement may be received for training costs for Advanced Technician Firefighter (see Subpart E).
 - c) The Fire Service Instructor must meet the requirements of Section 141.115(c).
 - d) The course and facility must be approved by OSFM as provided in Sections 141.110 and 141.115.
 - e) Credit for equivalent courses may be available in accordance with Section 141.120.
 - f) Modular Training
Advanced Technician Firefighter training can be taken in a series of modules or as a complete course. The State written examination (see Section 141.200) can be taken by module or by taking the complete examination.
 - g) Refresher Training
The Advanced Technician Firefighter is considered by OSFM to be the senior technical level in the fire suppression career ladder and, therefore, is not required to progress to another level in order to maintain certification. In order to insure that Advanced Technician personnel maintain their proficiency, they are encouraged to keep abreast of the state of the art by participating in refresher training reflecting applicable objectives.

(Source: Added at 34 Ill. Reg. 8297, effective June 8, 2010)

As an aid, reference books and pages are listed after the objective heading.
They will refer to one of the following published firefighter training handbooks

- 1. Jones and Bartlett 2nd Fire Fighter Skills
- 2. IFSTA Firefighting Essentials 5th
- 3. Delmar 3rd Firefighter's Handbook FFI & FFII (split book)
- 4. Delmar 3rd Firefighter's Handbook

This is an objective based course. Most skills are to be performed in an individual or leader type roll. The ability to evaluate a situation and determine a course of action is to be evaluated in each practical skill. All objectives are to be met and the knowledge will be evaluated in the written test and practical skills.

ADVANCED FIREFIGHTER TECHNICIAN OBJECTIVES

NOTE: The numbers in () refer to the text of NFPA 1001, Standard for Fire Fighter Professional Qualifications, 2008 Edition.

3-1 Fire Department Organization Cognitive Objectives

- 3-1.1 Identify the certification requirements of the Advanced Technician Firefighter
 - A. Successful completion of an OSFM approved course Advanced Technician Firefighter
 - B. Employee of an organized Illinois fire department
 - C. Successful Illinois practical skills completion (100%)
 - D. Successful completion of all Advanced Technician Firefighter cognitive objectives
 - E. Successful completion of all psychomotor objectives
 - F. Successful completion of the following co-requisite courses
 - 1. Successful completion of the OSFM examination at 70%
 - 2. Certification of Basic Operations Firefighter for three years
 - 3. Certification of FSVO
 - 4. NIMS IS200
 - 5. VMO Vehicle Machinery Operation
- 3-1.2 Identify the role of the Advanced Technician Firefighter within the organization (6.1.1)
 - A. Coordinate an interior attack line team
 - B. Extinguish an ignitable liquid fire
 - C. Control flammable gas cylinder fires
 - D. Protect evidence of fire cause and origin
 - E. Perform annual service test on fire hose
 - F. Test operability of and flow from a fire hydrant
- 3-1.3 Identify the following functions of the fire department
 - A. Prevention/ Public Education
 - B. Inspection
 - C. Suppression
 - D. Administration
 - E. Training / Safety

- F. EMS
- G. Special Operations

- 3-1.4 Identify the responsibilities of the advanced firefighter in assuming and transferring command within an incident management system (6.1.1)
- 3-1.5 Identify performing assigned duties in conformance with applicable NFPA and other safety regulations and AHJ procedures (6.1.1)

3-1 Fire Department Organization Practical Objectives

- 3-1.6 Demonstrate the ability to identify the need for command, when given a scenario (6.1.1)**
- 3-1.7 Demonstrate organizing and coordinating an incident within the incident management system until command is transferred, when given a scenario (6.1.1)**
- 3-1.8 Demonstrate the ability to use an accountability system in a multi-company event (6.1.1)**

3-2 Fire Behavior Cognitive Objectives

- 3-2.1 Identify how volume, velocity, density and color of smoke can effect firefighting operations
- 3-2.2 Identify conditions which differentiate between a contents fire and a structure fire
- 3-2.3 Identify how the following affect fire behavior:
 - A. Floor and ceiling construction
 - B. Roof construction
 - C. Light-weight wood construction
 - D. Mobile home construction

3-3 Safety Cognitive Objectives

- 3-3.1 Identify the role of the Incident Safety Officer (6.1.1)
- 3-3.2 Identify appointing an Incident Safety Officer (6.1.1)
- 3-3.3 Identify the use of an accountability system at a multi-company incident (6.1.1)
- 3-3.4 Identify the components of an accountability system
- 3-3.5 Identify the accountability (TAG SYSTEM) (6.1.1)

3-4 Communication Cognitive Objectives

- 3-4.1 Identify content requirements for a basic NFIRS incident report (6.2.1A)
- 3-4.2 Identify governing agencies (6.2.1A)
- 3-4.3 Identify the purpose and usefulness of accurate reports (6.2.1A)
- 3-4.4 Identify the consequences of inaccurate reports (6.2.1A)
- 3-4.5 Identify required incident report coding procedures (6.2.1A)
- 3-4.6 Identify department SOP's for alarm assignments (6.2.2A)

3-4 Communication Practical Objectives

- 3-4.7 Demonstrate the ability to determine necessary codes when completing a basic NFIRS incident report (6.2.1B)**
- 3-4.8 Demonstrate proof-reading an incident report (6.2.1B)**
- 3-4.9 Demonstrate using department computers or other necessary equipment to complete a basic NFIRS incident report (6.2.1B)**
- 3-4.10 Demonstrate operating fire department communications equipment (6.2.2B)**

3-5 Building Construction Cognitive Objectives

- 3-5.1 Identify dangerous building conditions created by fire and fire suppression activities (6.3.2A)
- 3-5.2 Identify indicators of building collapse (6.3.2A)
- 3-5.3 Identify the effects of fire and fire suppression activities on wood, masonry (brick, block, and stone), cast iron, steel, reinforced concrete, gypsum wallboard, glass, and plaster on lath (6.3.2A)
- 3-5.4 Identify indicators of structural instability (6.3.2A)

3-5 Building Construction Practical Objective

- 3-5.5 Demonstrate how to determine developing hazardous building conditions (6.3.2B)**

3-6 Ladders Cognitive Objectives

- 3-6.1 Identify the annual service test on ground ladders
- 3-6.2 Identify which type of ladder is appropriate for a given task

3-7 Fire Hose Cognitive Objectives

- 3-7.1 Identify procedures for safely conducting hose service testing (6.5.5A)
- 3-7.2 Identify indicators that dictate any hose be removed from service (6.5.5A)
- 3-7.3 Identify recording procedures for hose test results (6.5.5A)

3-7 Fire Hose Practical Objectives

- 3-7.4 Demonstrate operating hose testing equipment and nozzles (6.5.5B)**
- 3-7.5 Demonstrate recording the results of an annual hose test (6.5.5B)**
- 3-7.6 Demonstrate identifying damaged and or conditions that require a hose be removed from service (6.5.5B)**

3-8 Water Supply Cognitive Objectives

- 3-8.1 Identify using a Pitot tube and gauge to read and record flow pressures
- 3-8.2 Identify the following terms as they relate to water supply
 - A. Flow test
 - B. Static pressure
 - C. Residual pressure
 - D. Flow pressure
 - E. Normal operating pressure
 - F. Friction loss
 - G. Head pressure

3-8 Water Supply Practical Objective

- 3-8.3 Demonstrate using a Pitot tube and gauge to read and record flow GPM, static pressure and flow pressures**

3-9 Tools and Equipment Cognitive Objectives

- 3-9.1 Identify types of methods for cleaning tools and equipment (6.5.4A)
- 3-9.2 Identify the correct use of cleaning solvents when cleaning tools and equipment (6.5.4A)
- 3-9.3 Identify manufacturer and departmental guidelines for maintaining equipment and its documentation (6.5.4A)
- 3-9.4 Identify department problem-reporting practices (6.5.4A)

3-9 Tools and Equipment Practical Objectives

- 3-9.5 Demonstrate recording and reporting procedures when performing maintenance on tools and equipment (6.5.4B)**
- 3-9.6 Demonstrate operating power plants, power tools, and lighting equipment (6.5.4B)**

3-10 Forcible Entry Cognitive Objective

- 3-10.1 Identify the association between specific tools and special forcible entry/exit needs (6.3.2A)

3-10 Forcible Entry Practical Objectives

- 3-10.2 Demonstrate selecting tools for forcible entry (6.3.2B)**
- 3-10.3 Demonstrate the ability to operate hand and power tools used for forcible entry (6.4.1B)**
- 3-10.4 Demonstrate the ability to operate hand and power tools used for forcible entry to force entry through a garage door**

3-11 Ventilation Cognitive Objectives

- 3-11.1 Identify factors involved with ventilation that may impact search and rescue operations (6.3.2A)
- 3-11.2 Identify safety considerations when ventilating
- 3-11.3 Identify obstacles to ventilation
- 3-11.4 Identify considerations that must be made when conducting ventilation operations to determine the location and size of a ventilation opening, including:
 - A. Availability of openings

- B. Location of fire
- C. Direction in which fire will be drawn
- D. Type of building construction
- E. Wind direction
- F. Progress of fire
- G. Condition of building
- H. Obstructions
- I. Relative efficiency of large versus small openings

3-11.5 Identify the role of the advanced firefighter in ventilation operations (6.3.2A)

3-11 Ventilation Practical Objectives

3-11.6 Demonstrate ventilation coordination efforts in relation to search and rescue operations (6.3.2B)

3-11.7 Demonstrate the role of the advanced firefighter in ventilation operations (6.3.2B)

- A. Vertical**
- B. Horizontal**
- C. Hydraulic using a Fog Stream**
- D. Strip**
- E. Mechanical pressurization / Positive Pressure Ventilation (PPV)**

3-11.8 Demonstrate the use of all ventilation equipment on departmental apparatus in a fireground situation

3-11.9 Demonstrate proper procedures to operate an automatic or manual air conditioning duct

3-12 Fire Control Cognitive Objectives

3-12.1 Identify suppression approaches and practices for various types of structural fires (6.3.2A)

3-12.2 Identify the characteristics of pressurized flammable gases (6.3.3A)

3-12.3 Identify the elements of a gas cylinder (6.3.3A)

3-12.4 Identify the effects of heat and pressure on closed cylinders (6.3.3A)

3-12.5 Identify boiling liquid expanding vapor explosion (BLEVE) signs and effects (6.3.3A)

3-12.6 Identify methods for identifying contents of a cylinder. (6.3.3A)

- 3-12.7 Identify safe havens before approaching flammable gas cylinder fires (6.3.3A)
- 3-12.8 Identify water stream usage and demands for pressurized cylinder fires (6.3.3A)
- 3-12.9 Identify what to do if a cylinder fire is prematurely extinguished (6.3.3A)
- 3-12.10 Identify cylinder valve types and their operations (6.3.3A)
- 3-12.11 Identify alternative actions related to various hazards while fighting a cylinder fire, and when to retreat (6.3.3A)
- 3-12.12 Identify the proper methods for conducting a risk/benefit analysis

3-12 Fire Control Practical Objectives

- 3-12.13 Demonstrate the ability to control a cylinder fire**
 - A. Demonstrate assessing cylinder integrity and changing cylinder conditions (6.3.3B)**
 - B. Demonstrate the ability to execute effective advances and retreats at a cylinder fire (6.3.3)**
 - C. Demonstrate applying various water techniques for water application at a cylinder fire (6.3.3B).**
 - D. Demonstrate choosing effective procedures when cylinder fire conditions change (6.3.3B)**
 - E. Demonstrate opening cylinder control valves (6.3.3B)**
- 3-12.14 Demonstrate assembling a fire attack team, determine developing fire conditions, evaluate and forecast a fire's growth and development (6.3.2.1B)**
- 3-12.15 Demonstrate attack techniques and coordinate fire attack for a grade level fire (6.3.2.1B)**
- 3-12.16 Demonstrate attack techniques and coordinate fire attack for a Upper level fire (6.3.2.1B)**
- 3-12.17 Demonstrate attack techniques and coordinate fire attack for a basement fire (6.3.2.1B)**
- 3-12.18 Demonstrate extinguishing an exterior combustible liquid fire of at least 100 square feet using a handline that delivers a foam concentrate (6.3.1B)**

3-13 Protecting Evidence for Cause and Origin Cognitive Objectives

- 3-13.1 Identify methods to assess origin and cause of a fire (6.3.4A)
- 3-13.2 Identify types of evidence (6.3.4A)
- 3-13.3 Identify means to protect various types of evidence (6.3.4A)
- 3-13.4 Identify the role and relationship of the following in fire investigations: (6.3.4A)

- A. Advanced Technician Firefighter
- B. Arson / Fire investigator
- C. Insurance investigator

3-13.5 Identify the effects and problems associate with removing property or evidence from the scene (6.3.4A)

3-13 Protecting Evidence for Cause and Origin Practical Objectives

3-13.6 Demonstrate the ability to locate a fire's origin area (6.3.4B)
3-13.7 Demonstrate recognizing possible causes of a fire (6.3.4B)
3-13.8 Demonstrate protecting evidence of a fire's cause and origin (6.3.4B)

- A. Without contaminating evidence**
- B. Maintaining chain of custody**

3-14 Fire Prevention and Public Education Cognitive Objectives

3-14.1 Identify the procedure for performing a fire safety survey in a private residence including: (6.5.1)

- A. Identify life safety hazards
- B. Smoke and carbon monoxide detectors
- C. Discuss emergency preparedness

3-14.2 Identify organizational policy and procedures (6.5.1A)

3-14.3 Identify common causes of fire and their prevention (6.5.1A)

3-14.4 Identify the importance of a fire safety survey and public fire education programs to fire department public relations and the community (6.5.1A)

3-14.5 Identify parts of public education informational materials and how to use them (6.5.2A)

3-14.6 Identify basic public education presentation skills (6.5.2A)

3-14.7 Identify department standard operating procedures (SOP)for giving fire station tours (6.5.2A)

3-14.8 Identify departmental requirements for a pre-incident survey (6.5.3A)

3-14.9 Identify the importance for accurate diagrams in pre-incident surveys (6.5.3A)

3-14 Fire Prevention and Public Education Practical Objectives

- 3-14.10 Demonstrate the ability to complete a fire safety survey in a private dwelling so that fire and life safety hazards are identified, recommendations for their correction are made to the occupant, and unresolved issues are referred to the proper authority (6.5.1B)**
- 3-14.11 Demonstrate the ability to document public education presentations (6.5.2B)**
- 3-14.12 Demonstrate using prepared materials for a public education presentation (6.5.2B)**
 - A. Stop, Drop, and Roll**
 - B. Crawl low under smoke**
 - C. Plan and practice a home escape plan**
 - D. Call the fire department**
 - E. Test and maintain residential smoke alarms**
- 3-14.13 Demonstrate the ability to prepare a pre-incident survey, so that all required occupancy information is recorded, items of concern are noted, and accurate sketches or diagrams are prepared (6.5.3B)**

3-15 Fire Detection and Alarm Suppression Systems Cognitive Objectives

- 3-15.1 Identify sources of water supply for fire protection (6.5.3A)**
- 3-15.2 Identify the fundamentals of fire suppression and detection systems (6.5.3A)**
- 3-15.3 Identify common symbols used in diagramming construction features, utilities, hazards, and fire protection systems (6.5.3A)**
- 3-15.4 Identify the following key terms:**
 - A. Accelerator**
 - B. Deluge system**
 - C. Dry pipe system**
 - D. Exhauster**
 - F. Fire watch**
 - F. Outside Stem and Yoke (OS&Y)**
 - G. Post Indicator Valve (PIV)**
 - H. Life safety**
 - I. Auxiliary appliances**
 - J. Local application system**

3-15 Fire Detection and Alarm Suppression Systems Practical Objective

- 3-15.5 Demonstrate the ability to identify the components of a fire suppression and detection system (6.5.3B)**

3-16 Firefighter Survival Cognitive Objectives

- 3-16.1 Identify teamwork and its role in firefighting
3-16.2 Identify techniques and tools for leading a team of firefighters in the removal of an incapacitated firefighter (6.3.2A)

3-16 Firefighter Survival Practical Objectives

- 3-16.3 Demonstrate techniques and the tools for leading a team of firefighters in the removal of an incapacitated firefighter while transmitting a mayday, requesting resources and transmitting location while locating a downed firefighter (6.4.2B)**

- A. Horizontally**
- B. From a basement**
- C. From a second story window**
- D. From a second story via stairs**
- E. Entrapped in a structure**
- F. Entangled in a structure**
- G. Without functioning SCBA**
- H. Demonstrate leading a team of firefighters in an emergency/rapid escape from a structure**

- 3-16.4 Demonstrate assembling a Rapid Intervention Team (RIT) with proper tools and equipment and function as a RIT team when a mayday is called**

3-17 Technical Rescue Cognitive Objectives

- 3-17.1 The Advanced Technician Firefighter's role at a technical rescue operation (6.4.2A)
3-17.2 The Advanced Technician Firefighter's guidelines for technical rescue operations
3-17.3 Identify the hazards associated with technical rescue operations (6.4.2A)

3-17.4 Identify types and uses for rescue tools (6.4.2A)

3-17.5 Identify rescue practices and goals (6.4.2A)

3-17 Technical Rescue Practical Objective

3-17.6 Demonstrate the ability to assist rescue teams and establish public barriers when assigned